PR4

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/322,852	05/28/1999	RICHARD HASHA	305818009.10	8541

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EXAMINER
CAO, DIEM K

ART UNIT	PAPER NUMBER
2126	11

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

PP4

	Application No.	Applicant(s)
Office Action Summary	09/322,852	HASHA ET AL.
	Examiner	Art Unit
	Diem K Cao	2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _28 May 1999_ .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-39_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-39_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _5_ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

U.S. Patent and Trademark Office
PTO-326 (Rev. 04-01)   Office Action Summary   Part of Paper No. 11

DETAILED ACTION

1.   This Office Action is in response to the Application filed on 5/28/1999.

2.   Claims 1-39 are presented for examination. Applicant has amended claims 1-7 and added

claims 8-39.

Drawings

3.   The corrected or substitute drawings were received on 11/14/2001. These drawings are

approved by the Examiner.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 1-2, 4-5, 7-13, 20-23, and 37-39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lortz et al. (U.S. 6,438,618 B1).

As to claim 1, Lortz teaches a system (event provider service; col. 6, lines 37-47) for

tracking when a software component changes state (when a home device is connected to a

computer control system col. 1, lines 33-49 and an alarm has been set off downstairs; col. 8, lines

37-53) and for providing a state change notification of a change in state of the tracked software

component (the event object forwards ... of the client 420; col. 8, lines 54-62), and for providing

a property notification to the software component when a property of another software

component is set (Software applications ... sending command messages across the network; col.

3, lines 1-15 and the event may include ... to respond accordingly; col. 1, lines 33-49).

However, Lortz does not explicitly teach a tracking system and a property notification system separately, and software components of the system use services of both the tracking system and the property notification system. The system of Lortz includes the tracking function and property notification function. It would have been obvious to one of ordinary skill in the art to improve the system of Lortz by implementing the above two functions as separate systems because it would provide the users/developer a better method to implementing and maintaining the system.

As to claim 2, Lortz teaches an event notification system for providing an event notification to the software component when at least one of the software component and another software component generates an event (server 30, event filters 31, a client can registers an interest in events; col. 6, lines 48-61).

As to claim 4, Lortz teaches a directory component (server 30, event filters 31) that receives a tracking reference and returns a corresponding behavioral reference (pointer back to the client ... of that filter 31; col. 7, line 51 – col. 8, line 13).

As to claim 5, Lortz teaches a system (event provider service; col. 6, lines 37-47) for tracking when a software component changes state (when a home device is connected to a computer control system col. 1, lines 33-49 and an alarm has been set off downstairs; col. 8, lines 37-53) and for providing a state change notification of a change in state of the tracked software component (the event object forwards ... of the client 420; col. 8, lines 54-62), an event notification system for providing an event notification to the software component when at least one of the software component and another software component generates an event (server 30, event filters 31, a client can registers an interest in events; col. 6, lines 48-61).

However, Lortz does not teach a tracking system and a event notification system

separately, and software components of the system use the services of the tracking system and

the event notification system. The system of Lortz includes the tracking function and event

notification function. It would have been obvious to one of ordinary skill in the art to improve

the system of Lortz by implementing the above two functions as separate systems because it

would provide the users/developer a better method to implementing and maintaining the system.

As to claim 4, see rejection of claim 4 above.

As to claim 8, Lortz teaches a communications bus (high performance serial bus; col. 2,

lines 54-63), at least one server node (device A, control object 25; col. 6,lines 36 – 62 and Fig. 3)

and at least one client node (home computer 1; col. 3, lines 1-14), wherein said at least one

server node, said at least one client node and said at least one bus management component are

interconnected via said communications bus (Fig. 3), and wherein each of said at least one client

node includes at least one client resource (client 20; col. 6, lines 37-47) for requesting

notification when at least one of an event is generated (a client 20 can register an interest in

events; col. 6, lines 48-61), a server resource (control object 25; col. 6, line 37-61) of said at least

one server node changes state or a server resource of said at least one server node changes a

property (property change message; col. 8, lines 37-53), a method for managing resources of the

system, comprising:

tracking when a software component changes state (when a home device is connected to

a computer control system col. 1, lines 33-49 and an alarm has been set off downstairs; col. 8,

lines 37-53) and providing a state change notification of a change in state of the tracked software

component (the event object forwards ... of the client 420; col. 8, lines 54-62); and

providing a property notification to the software component when a property of at least

one of the software component and another software component is set (Software applications ...

sending command messages across the network; col. 3, lines 1-15 and the event may include ...

to respond accordingly; col. 1, lines 33-49).

However, Lortz does not explicitly teach a bus manager having at least, one bus

management component. It is well known in the art that bus mastering improves performance

and is available in most modern bus architecture. It would have been obvious to improve the

system of Lortz by including a bus manager because it improves performance of the system.

As to claim 9, see rejection of claim 2 above.

As to claim 10, Lortz teaches receiving by the system a request from the client to track a

state of the object (a client 20 can register an interest in events; col. 6, lines 48-61), watching the

state of the object to detect when the object enters the up state (when the downstairs ... is

connected to the network; col. 7, lines 1-20) and when the object enters the up state, first

performing at least one behavior that is specified by the client to be performed when the object

enters the up state (an event may be generated ... to a computer control system; col. 1, lines 33-

49) and when the object is in the up state, monitoring the state of the object by the system (the

downstairs burglar alarm ... event object 455; col. 7, lines 1-20).

However, Lortz does not teach in the same embodiment to detect when the object enters

the down state, and monitoring the state of the object to detect when the object enters the down

state, and when the object enters the down state, second performing at least one behavior that is

specified by the client to be performed when the object enters the down state. In another

embodiment, Lortz teaches client can register for event when the alarm is set off. It would have

been obvious the client would also want to know when the object is unavailable for better

monitoring and controlling.

As to claim 11, Lortz teaches wherein said providing a property notification includes first

registering by the client resource to track a server resource (a client 20 can register an interest in

events; col. 6, lines 48-61).

However, Lortz does not teach after the server resource enters the up state, second

registering by the client resource to watch a property of the server resource, and after the

property of the server resource is set, invoking by the server resource a property set function of

the client resource. Lortz teaches the client can register for interest events at any time, and the

server 30 invokes a property set function of the client resource.

It would have been obvious one could modify the teaching of Lortz because it is just a

matter of implementation.

As to claim 12, Lortz teaches (col. 7, lines 21-50) wherein said providing an event

notification includes registering by a client resource an interest in an event type (a client 20 may

wish ... control object), and upon the occurrence of an event classified with said event type,

providing an asynchronous event signal that is distributed to all client resources that have

registered to listen for the signal (the event object 35 ... by the event object 35).

As to claim 13, Lortz teaches wherein each event has an associated event type whereby

event types are aggregated types (events from multiple control objects, events from a control

object; col. 7, lines 25-37).

As to claim 20, Lortz teaches wherein said providing an event notification includes:

registering by a client resource of a client node with a listener component an interest in

listening for an event, wherein said registering includes invoking a listen message and specifying

an event type to the listener component (a client 20 application interested ... of that filter 31; col.

7, line 64 – col. 8, line 13); and

receiving by the client resource from the listener component an event notify message

along with event information when an event of that event type is generated (the event object 35

forwards the event to the client 20; col. 7, line 64 – col. 8, line 13).

As to claim 21, Lortz does not explicitly teach wherein said providing an event

notification further includes un-registering by the client resource the interest in listening for the

event, wherein said un-registering includes invoking a -stop listening message along and

specifying the event type to the listener component. However, un-registering the interest for an

event by the client is well known the system of Lortz would implement that feature.

As to claim 22, Lortz wherein each client node has a listener component through which

is routed all event related messages for all client resources registered to listen for events on the

node (client application 20, in-process object; col. 7, line 64 – col. 8, line 36).

As to claim 23, Lortz teaches (col. 7, line 64 – col. 8, line 36) a listener component (in-

process object) of a client node (client 20) routes event-related messages (specifying an interest)

to a listener bus management component (filter 31) whereby the listener component notifies the

listener bus management component to listen for all event types (events) for which client

resources are registered to listen for events on the client node.

As to claim 37, Lortz teaches computer executable instructions for performing the

method of claim 8 (a method for implementing ... home network; col. 2, lines 38-43).

As to claim 38, Lortz teaches a modulated data signal carrying computer executable instructions for performing the method of claim 8 (a method and device ... home network; col. 2, lines 38-43).

As to claim 39, Lortz teaches a computing device comprising means for performing the method of claim 8 (device; col. 2, lines 38-43).

6.   Claims 3, 6, 27, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lortz et al. (U.S. 6,438,618 B1) in view of Brown (U.S. 5,857,190).

As to claim 3, Lortz does not teach a logging system for logging records of activity of the software component. Brown teaches a logging system for logging records of activity of the software component (an event logging system; col. 2, lines 23-35). It would have been obvious to apply the teaching of Brown to the system of Lortz because it provides the users with method to detect system errors, and derive statistical data.

As to claim 6, see rejection of claim 3 above.

As to claim 27, see rejection of claim 3 above.

As to claim 35, Lortz as modified by Brown does not teach the logging is capable of being disabled. Brown teaches the log API determines whether the event is a loggable event. Thus, by removing the log API, the logging is disabled. It would have been obvious to improve the system of Lortz as modified by Brown to implementing the disabled feature because it provides the users with method to control the logging system.

7.   Claims 14-15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lortz et al. (U.S. 6,438,618 B1) in view of Fernando (U.S. 6,363,435 B1).

As to claim 14, Lortz does not explicitly teach each event has an associated event type whereby event types are hierarchically organized. Fernando teaches event types are hierarchically organized (a listening object ... within the hierarchy; abstract). It would have been obvious to apply the teaching of Fernando to the system of Lortz because it provides the users with a method that permits interested objects to listen for events occurring in a hierarchical object model.

As to claim 15, Lortz does not teach registering by a client resource for a particular event type includes registering the client resource for all event types falling with the hierarchical classification for the particular event type. Lortz teaches client can register for all events of a particular device/object control (col. 7, lines 21-40).

As to claim 19, Lortz does not teach the hierarchy of an event type embedded in the identification of the event type. Fernando teaches the hierarchy of an event type embedded in the identification of the event type (a listener object ... the A object; col. 9, lines 33-63).

8.   Claims 16-18, 24-26 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lortz et al. (U.S. 6,438,618 B1) in view of Pohlmann et al. (U.S. 6,446,136 B1).

As to claim 16, Lortz does not teach wherein event types include a timer event type. Pohlmann teaches event types include a timer event type (discrete event; col. 4, lines 19-48).

As to claim 17, Lortz does not teach a timer event type is one of a catastrophic timer event, a warning timer event and an informational timer event. Pohlmann teaches event type could be discrete or non-discrete (col. 4, lines 19-48). It would have been obvious the system of Lortz could implement different types of event that client interests in.

As to claim 18, see rejection of claim 17 above.

As to claim 24, Lortz does not explicitly teach each listener component includes a

listener table cache that contains a mapping from each event type for which a listen request has

been registered and for each client that has registered for the event type, such that when the

listener component receives an event notification, the listener component accesses the listener

table cache to notify each client resource registered to listen for the event type. Pohlmann teaches

each listener component includes a table that contains a mapping from each event type for which

a listen request has been registered and for each client that has registered for the event type

(Event manager maintains ... maintained in the memory; col. 5, lines 3-26). It would have been

obvious to apply the teaching of Pohlmann to the system of Lortz because it provides the users

with a method for better management events.

As to claim 25, Lortz does not explicitly teach wherein the listener bus management

component includes a listener table that contains a mapping from each event type to the

registering client nodes such that when the listener bus management component receives an

event posting, the listener bus management component notifies each node that has registered to

listen for events of the event type and for events of any event type that is aggregated within the

event type. Lortz teaches the bus manager component includes a filter string, and bases on the

filter string, the bus manager component notify each client resource registered to listen for the

event type (col. 8, lines 1-13). Pohlmann teaches each event manager includes a table that

contains a mapping from each event type for which a listen request has been registered and for

each client that has registered for the event type (Event manager maintains ... maintained in the

memory; col. 5, lines 3-26). It would have been obvious to apply the teaching of Pohlmann to the

system of Lortz because it provides the users with a method for better management events.

As to claim 26, Lortz teaches wherein the listener bus management component notifies each node that has registered to listen for events of the event type and for events of any event type that is a hierarchical parent of the event type (filter 31, filter string; col. 7, line 65 – col. 8, line 13).

As to claim 36, Lortz does not teach a server node of said at least one server node is also a client node of said at least one client node. Pohlmann teaches a server node is also a client node of at least one client node (the event manager 402 ... subscription; col. 5, lines 3-26).

9.   Claims 28-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lortz et al. (U.S. 6,438,618 B1) in view of Brown (U.S. 5,857,190) further in view of Pohlmann et al. (U.S. 6,446,136 B1).

As to claim 28, Lortz does not teach each of the at least one log record comprises at least one of: type information, time information, creator information and text information. Pohlmann teaches each of the at least one log record comprises at least one of: type information, time information, creator information and text information (event structure; col. 3, line 10 – col. 4, lines 18 and statefull events are stored; col. 5, lines 3-26). It would have been obvious to improve the system of Lortz by applying the teaching of Pohlmann because it provides the users with information relating with events occur in the system.

As to claim 29, Lortz does not teach the logging includes logging at a local log facility and logging at a central log facility. Brown teaches a logging at a central log facility (event logging system ... server; col. 2, lines 44-66). Although Brown does not explicitly teach a local log facility, Brown teaches the log API reports event in batch. Obviously, there is local log facility to store all the events before events are being reported.

As to claim 30, Lortz does not explicitly teach each client node includes an instance of a local log facility which receives all log records from various software components on the client node buffers the log records until they are transmitted to the central log facility. See rejection of claim 29 above.

As to claim 31, Lortz as modified does not teach a local log facility is configured to forward its records to another local log facility instead of the central log facility. One of ordinary skill in the art could modify the system of Lortz to forward the records to another local facility because there are many ways to implement a system.

As to claim 32, Lortz does not teach there is only one instance of the central log facility for the whole system which accepts all log records from all components within the system and whereby the central log facility provides for the final storage of logging information. Brown teaches there is only one instance of the central log facility for the whole system which accepts all log records from all components within the system and whereby the central log facility provides for the final storage of logging information (a group of interoperable servers ...multiple databases to store event information... event logging system; col. 2, line 57 – col. 3, line 45).

As to claim 33, Brown teaches the central log facility provides long term, off line, archival of the entire system (event information are stored in multiple database; col. 3, lines 1-45).

As to claim 34, Lortz as modified does not teach the central log facility provide for on-line viewing of a desired portion of the log records. It is well known in the art that information from the database could be view on line. It would have been obvious the system of Lortz as modified could implement those well known features for better control and monitoring.

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

-    Hager et al. (U.S. 6,532,498 B1) teaches a method and system for event notification

     between software application program object.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Diem K Cao whose telephone number is (703) 305-5220. The

examiner can normally be reached on Monday - Friday, 9:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Follansbee can be reached on (703) 305-8498. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 308-6296 for regular

communications and (703) 305-9731 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
PO Box 1450
Alexandria, VA 22313-1450

Or fax to:
-    AFTER-FINAL faxes must be signed and sent to (703) 746-7238.
-    OFFICIAL faxes must be signed and sent to (703) 746-7239.
-    NON-OFFICIAL/DRAFT faxes should not be signed, please send to (703) 746-7140.

Diem Cao
June 12, 2003